

REMARKS

No amendments are being filed at present.

Objections to the figures

Regarding the objection that "others of the data values" is not shown in the figures, this feature is shown in figures 7 to 9. Part 710 in figure 7 encodes data by differential rotation, which is explained in the specification at page 19 onwards. Input data is encoded by a relative mapping. This involves encoding the data value by reference to a preceding data value. Figure 8 shows an example in which the result of the encoding is data values which are partially differential relative to the preceding data value. They are complex values with a reference frame whose rotation in steps of 90 degrees which is set by the preceding data value. Figure 9 shows corresponding decoding. Thus Figures 7,8 and 9 show an example of the claim features of "data values encoded by a mapping in a complex frequency domain according to corresponding other data values" because the preceding data value is an example of a corresponding other data value.

Similarly, the same figures show an example of "an encoder for encoding the data values by carrying out a mapping in a complex frequency domain according to corresponding others of the data values", for the same reasons. Accordingly no amendments are being made to the drawings.

Section 112 rejections

In response to the section 112 rejections the Examiner is referred to the above explanation of the example of "other data values". It would be clear to a skilled person that "other data value" has its ordinary meaning of a data value amongst the data values transmitted, other than the one which is currently being encoded or decoded. Thus the preceding data value can be used, or the data value two or more values earlier can be used for example.

The mention in claim 9 of "received data values" means the data values currently being decoded, and this would be clear to a skilled person.

Regarding claim 18, "corresponding other data values" are the other data values used by the encoder and decoder as discussed above. The word corresponding has been used to indicate that there is a relationship or mapping to the data values being encoded or decoded.

Similar comments apply to claim 21. As a skilled person would find these terms clear, no amendment needs to be made. If the Examiner is still unclear and maintains this rejection for any reason, more explanation would be appreciated of what part is unclear and what other meaning the Examiner considers could apply.

Section 102 rejection of claim 1 over Stuart

This rejection is respectfully traversed for the following reasons.

Claim 1 specifies a subcarrier reference generator for generating a number of subcarrier reference signals each for use in demodulating a different one of a number of frequency channels. The Examiner argues that this feature is shown by the I and Q signals in col 2,3,6 and 7 and fig 7 of Stuart. But these I and Q signals are not generated reference signals, for use in demodulating, instead they are outputs of the demodulating circuit 210 as shown in figure 6 or 7. Figure 2 of Stuart does show two reference signals 205 and 206 for demodulating the incoming signal 201. But these two signals are for demodulating the same frequency incoming signal, not for demodulating different ones of a number of frequency channels as claimed.

Claim 1 also specifies compensating for degradations in the generated reference signals by averaging. The only averaging shown in Stuart is carried out on the I

and Q outputs of the demodulating circuit 210. There is no averaging of the two reference signals 205 and 206 used for demodulating.

For these reasons claim 1 cannot be anticipated by Stuart.

Regarding obviousness, Stuart is only concerned with determining noise. There is no suggestion or incentive to lead a skilled person to consider degradations in subcarrier reference signals, nor how to compensate for such degradations. Hence claim 1 cannot be considered to have been obvious in view of Stuart.

Section 102 rejection of claim 21 over Way

This rejection is respectfully traversed for the following reasons.

Claim 21 specifies “encoding the data values by carrying out a mapping in a complex frequency domain according to corresponding others of the data values”. The Examiner cites col 13 lines 13-19 which state that “FIG. 8 shows additional detail of the electrical portion of a transmitter..... A plurality of modulators (for purposes of illustration, four) 124, 126, 128, 130 produce a signal for each of a plurality of channels. Each channel signal is preferably filtered with a low pass filter 132, 134, 136, 138 prior to upconversion by a local oscillator 140, 142, 144, 146.”

This passage provides no support for the Examiner's argument as it does not show encoding according to corresponding others of the data values. Nowhere else in Way shows or suggests this distinctive feature and so claim 21 cannot be anticipated.

Other matters

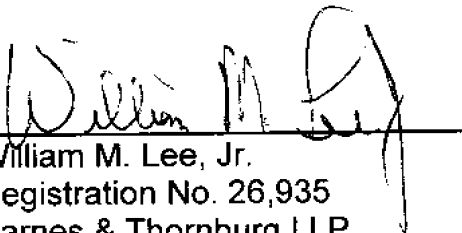
All the remaining claims are dependent or have corresponding distinctive features and so are submitted to be allowable for the same reasons. This means

all the points raised by the Examiner have been addressed. The helpful indication of allowable subject matter is appreciated but such claims would give an unnecessarily narrow scope of protection. Favorable reconsideration is respectfully requested.

A necessary Petition For Extension of Time is also submitted herewith.

January 10, 2008

Respectfully submitted,

A handwritten signature in black ink, appearing to read "William M. Lee, Jr.", is written over a horizontal line.

William M. Lee, Jr.
Registration No. 26,935
Barnes & Thornburg LLP
P.O. Box 2786
Chicago, Illinois 60690-2786
(312) 214-4800
(312) 759-5646 (fax)